The Comprehensive Business Income Tax System: A Proposal for the Ultimate Neutrality Between Debt and New Equity Issues?

ISSN 1857-9973 336.226.12(100)

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Abstract

The majority of experts agree that taxes are distortionary in nature. This is relatively true for all of the different groups of taxes, but for the corporate taxes is exceptionally obvious. The existence of corporate taxes can affect the company's behavior in a number of ways and one of them is the distortion of choice of the sources of finance. As it is known, companies usually face 2 different financial alternatives to cover their investment opportunities: debt and equity (new equity issues or alternatively, retained earnings). According to the principles of corporate taxation, since interest payments are in fact tax deductible from the corporate income tax base, the debt source of finance is commonly considered as tax preferred as compared to the equity source of finance. Similarly, retained earnings are more preferred to new equities since capital gains are usually taxed upon realization or eventually exempted from taxation when reinvested. The theory suggests many varieties of corporate tax systems that sustain relative capacities to offset the excessive burden on the external equity supported investments and thus, eliminate the debt-equity related distortions. From the wider literature offer, we chose to examine the comprehensive business income tax system (CBIT), a proposal of the US Treasury Department and compare it with the basic "classical" approach in corporate taxation. The intention is to explore its properties from the view of neutrality and the allocation criteria, for which purpose the basic methodology of EMTR is additionally modified and extended. We hope to prove that this corporate system has justified its reputation in the sphere of our interest.

Keywords

Comprehensive business income tax, cost of capital, effective marginal tax rate, classical corporation tax, debt, new equity issues, double taxation.

1. Introduction

Recently, we've described and explained the distortions that usually arise from the isolated implementation of corporate taxes, a condition which assumes total abstraction of the personal taxes. In this article, we also include the personal taxes in our analysis, with intention to explore the investment decision, not only from the company's perspective, but from the shareholder's point of view as well, a condition commonly referred as "double taxation". This phenomenon is granted to fact that the corporate tax base (i.e. the corporate income) cannot be limited only at the corporation observed as a form of legal entity. Usually, under the classical corporation tax

regime, after the initial taxation at corporate level, corporate profits are distributed to the shareholders in a form of dividends, capital gains or interest payments, and are subject to additional taxation at personal level.
The ultimate consequence of the referred phenomenon is imposition of an additional “extra” burden on total corporate profit expressed integrally from its source to its destination. Respecting that this “excessive” taxation of the profit is considered unfair and could distort the economic activity of firms, the authorities try to construct more appropriate “neutral” tax systems with attributions to effectively tax the economic rents (or the extra profit) and at the same time avoid taxation of the normal return. In addition, we give a brief literature review to some integrated modalities of corporate tax systems with the desired properties, which actually allow a higher degree of neutrality in corporate taxation. The following tax systems are protagonists proposals of the OECD (Organization for Economic Co-operation and Development), as a part of the tax reform that was undergone recently, acknowledged as more convenient to eliminate the difference between debt and equity associated with the classical approach of corporate taxation: the Full Integration Tax System (FIT), the Allowance for Corporate Equity Tax System (ACE), the Allowance for Shareholder Equity Tax System (ASE), the Comprehensive Business Income Tax (CBIT) etc.
It is a commonly known truth that borrowed capital is a superior source of finance from the taxpayer’s point of view, as a result of the usual and widely excepted treatment of interest payments. In practice, since companies are allowed to deduct interest payments from their corporate income tax base, the system subsidizes the debt source finance in a manner that the action reduces the opportunity cost (the discount rate) of the debt-financed investment. This gives a certain advantage to the debt finance, since it is tax preferred in front of equity, which oppositely is fully taxed. The last triggers unfavourable behaivour of the company, to use more borrowed capital, thus increasing the risk of bankruptcy and insolvency of the firm. The last presents the most common and typical distortion of corporate finance, induced by the traditional, “classical” treatment of corporate profit. But, as mentioned above, the leading economic organizations such as the OECD, have made a break-through in the sphere of business taxation, proposing some alternative models of hybrid tax systems, that are much or less distinctive from the classical approach and more evenly allocate the burden across the different sources of finance, for example such as the CBIT system. Initially developed and proposed by the US Treasury Department, and after accepted and promoted by the OECD, this regime successfully eliminates the need for integration between the corporate and personal taxes on equity by imposing a restriction on the possibility to deduct the interest payments. In fact, interest income is no longer deductible from the corporate income tax base and at the same time is exempt from taxation at personal level. The result should be neutrality and indifference between debt and equity.

2. Modifying the Basic Methodological Frame

We pay our attention in this first from the following series of articles, exclusively on the investments financed with new equity issues (external equity). As we know from business practice, equities could be found in 2 (two) fundamental forms: external equity (new equity issues), which provides the equity capital for the ongoing projects externally, through issues of the new company’s shares on the capital market; and retained earnings (retentions of profit), which are formed from the company’s accumulated (non-distributed) profit, usually subject of reinvestment. The models of taxation discussed in this article, could be easily applied in the investment scenario covered with retained earnings as well, of course modified with its specific circumstances. With the purpose to achieve more detailed, systematic approach in exploration of the attributions and specificities of the models, we decided to study them separately, and dedicate this article only for the new equity finance. Other reasons for this are the limited space, minimizing the risk for confusion, and providing a better comparison of the effects. The basic methodology is consisted of the effective marginal tax rates analytical frame (EMTR), which is additionally modified and extended to express all the newly occurred conditions that define

"double" taxation of corporate profit. With the adapted methodology of EMTR, we have managed to identify and explain many varieties of integrated tax systems that sustain some relative (theoretical) capacities to offset the excessive burden on the external equity supported investment. Here, we present in detail only the Comprehensive Business Income Tax System (CBIT) and compare it with the basic Classical Corporation Tax System (CCT).
To recall, according to Devereux & Griffith [1], [2], [3], the effective marginal tax rate is defined as:

$$[1] \qquad \tilde{p} = \frac{(1-A)\{\rho + \delta(1+\pi) - \pi\}}{(1+\pi)(1-t)} - \frac{F(1+\rho)}{\gamma(1+\pi)(1-t)} - \delta$$

In order to isolate the pure effects that arise from the imposition of the code, as well as to simplify the calculation for the purpose of a better illustration of the effects, once again, we suggest the following assumptions: the net-present value of depreciation allowancess is asumed 0 (A = 0), there is no inflation in the economy (π = 0, ρ = r), the rate of economic depreciation is assumed 0 (δ = 0) and the real interest rate is positive (r > 0). If we consider the previous assumptions and label m^d as the personal tax rate on dividend income, z as the effective personal tax rate on capital gains, m^i as the personal tax rate on interest income and c as the tax credit rate allowed for dividends paid, then the tax discrimination variable requires the form of:

$$[2] \qquad \gamma = \frac{(1-m^d)}{(1-z)(1-c)}$$

The shareholder's discount rate transforms to:

$$[3] \qquad \rho = \left(\frac{1-m^i}{1-z}\right) r$$

And the general form of the cost of capital rearranges to:

$$[4] \qquad \tilde{p} = \frac{\rho}{(1-t)} - \frac{F(1+\rho)}{\gamma(1-t)}$$

Recognizing the fact that under existence of personal taxes, the financial constraints variable F^{NE} when the project is financed with new equities is measured as:

$$[5] \qquad F^{NE} = -\frac{\rho(1-\gamma)}{(1+\rho)}$$

Derives a cost of capital for this alternative investment of:

$$[6] \qquad \tilde{p} = \frac{\rho}{(1-t)} - \frac{-\frac{\rho(1-\gamma)}{(1+\rho)}(1+\rho)}{\gamma(1+t)} = \frac{\rho}{(1-t)} - \frac{-\rho(1-\gamma)}{\gamma(1-t)} = \frac{\rho\gamma}{(1-t)\gamma} - \frac{(-\rho+\rho\gamma)}{(1-t)\gamma} =$$
$$= \frac{\rho\gamma + \rho - \rho\gamma}{(1-t)\gamma} = \frac{\rho}{(1-t)\gamma}$$

While under the same conditions, the financial constarints variable F^{DE} when the project is financed with debt:

$$[7] \qquad F^{DE} = \frac{\gamma[\rho - r(1-t)]}{(1+\rho)}$$

Generates a cost of capital for the debt-financed investment alternative of:

$$[8] \qquad \tilde{p} = \frac{\rho}{(1-t)} - \frac{\frac{\gamma[\rho - r(1-t)]}{(1+\rho)}(1+\rho)}{\gamma(1+t)} = \frac{\rho}{(1-t)} - \frac{[\rho - r(1-t)]}{(1-t)} = \frac{\rho - [\rho - r + rt]}{(1-t)} =$$
$$= \frac{r - rt}{(1-t)} = \frac{r(1-t)}{(1-t)} = r$$

Before we proceed, we'd like to reffer to our main analitical tool, and that is, the investment tax wedge coefficient defined as ($\tilde{p} - r$). Depending on the relation between the cost of capital $\tilde{p}$ and the real interest rate r, we can distinct 3 different conditions. The first condition is when the effective tax burden is positive ($\tilde{p} > r$) and as a result of that, the tax system depresses the investment activities. In terms of integrated taxation of company's income, this means that both, the ecomonic rent and the normal return are effectivelly taxed. The second condition is when the effective tax burden is equal to 0 ($\tilde{p} = r$), when the tax system is neutral to the investment decision. In other words, under these conditions, the normal return of corporate profit is left from taxation and only the extra profit is being subject to taxation. And the third and the most preferrable condition from the investor's point of view is when the effective tax burden is negative ($\tilde{p} < r$), when the tax system supports the overall investment. Here, the investment is being effectivelly „subsidized" by the system, enabling the investor to legaly escape from taxation a rate of return higher than the normal rate of return. In perfect economies without presence of taxes, the cost of capital is identical with the real interest rate ($\tilde{p} = r$) and the economic agents are completely indifferent between the investment decision and the decision to save. The existence of the national tax system diverges the difference between the cost of capital and the interest rate and therefore creates a positive tax wedge ($\tilde{p} > r$).

3. The Classical Corporation Tax System (CCT)

First, we'd like to introduce the so-called „classical" approach in corporate taxation, which has been traditionally the most used and widelly practiced form of corporate tax. Actually, the classical system posts a true representation of what is known as „double" taxation and a classical example of the pure separate taxation of corporate income. It will serve as a baseline model for comparison of the CBIT system discussed futherlly. So, what is the classical corporate income tax system?

Basically, the CCT is a rudimentary form of corporate tax that treats the corporate income in a conservative and fundamental way. It's a system of taxing companies in which the company is treated as a taxable entity separate from its own shareholders. The profits of companies under this system are therefore taxed twice, first when made by the company and again when distributed to the shareholders as dividends and capital gains. Formally, there is no integration at all between the corporate and personal income tax under the CCT system. In the essence of the Classical Corporation Tax is double taxation of corporate income. As stated by Harberger [4], „Such a tax system discriminates against the incorporation of business ideas, restrains the supply of equity finance necessary for their economic utilisation, reallocates resources from the corporate sector to the unincorporated one and thus causes an efficiency loss to the whole economy". That's why, according to Kari and Yla-Liedenpohja [5], "The need

to eliminate these drawbacks led to tax reforms aimed at integrating the taxation of corporations and their owners". So, how could we express the true nature of this typical form of corporate tax and illustrate the effects from it in terms of the proposed methodology?
Technically speaking, as described by Devereux and Griffith [6], "A Classical System makes no allowance for "double" taxation, so that dividend income is subject to corporate income tax and taxed again as personal income". The authorities impose the corporate tax at the corporate level differently from the personal taxes at the stockholder level and at the same time do not allow any tax credit on dividend distributions (c = 0). Usually, the combination of the levels (percentage points) of the different tax rates falls under discretion of the policy maker. Concidering this, we can identify the CCIT system as *(t, m^d, m^i, z, c = 0).*

3.1 CCT in debt-financed alternatives

It is easy recogniozed that the CCT produces a zero investment tax wedge variable if we take in account expression [8] that the cost of capital in this alternative is equal to the real interest rate:

[9] $$\widetilde{p} - r = r - r = 0$$

A conclusion is drawn that, if the overall integrated effect from the corporate and the personal tax is observed, in every case when the investment project is financed with external debt, the system will be neutral to the investment decision, *ceteris paribus.* The introduction of personal taxes do not affect these investments in a different way rather than the case of isolated application of the corporate tax, so it is evident that the „double" taxation effect is not present here.

3.2 CCT in equity-financed alterantives

The implications of the conditions of classical system in this alternative is initially found in parameters *γ* and *ρ:*

[10] $$\gamma = \frac{(1-m^d)}{(1-z)(1-c)} = \frac{(1-m^d)}{(1-z)} \quad \text{and} \quad \rho = \left(\frac{1-m^i}{1-z}\right) r$$

Including these in term [6], the cost of capital will become:

[11] $$\widetilde{p} = \frac{\rho}{(1-t)\gamma} = \frac{\dfrac{(1-m^i)r}{(1-z)}}{(1-t)\dfrac{(1-m^d)}{(1-z)}} = \frac{(1-m^i)r}{(1-t)(1-m_d)}$$

And finally the investment tax wedge will transform to:

[12] $$\widetilde{p} - r = \frac{(1-m^i)r}{(1-t)(1-m^d)} - r = r\left[\frac{(1-m^i)}{(1-t)(1-m^d)} - 1\right]$$

Accordingly, as stated in this case by Gruevski [7], "The effects from corporate taxation very often depend on the cross-effects from the personal taxation". Expression [12] shows that the investment decision in this basic and most extended version of taxation of corporate income is determined largely from the inter-relation between the different personal tax rates (m^i and m^d)

and the corporate tax rate *t.* It is also self-evident, as we can see from the apsence of symbol z, that the effective personal tax rate on capital income is nonrelevant for the present model of taxation. The effect from „double" taxation is quantified with the term $(1 - m^i)/(1 - t)(1 - m^d)$. Actually, it represents the combined corporate and personal income tax liability of the CCT, which may have variable values depending on different dimenzions of the relevant tax rates imposed by the code. For example, if we take the actual situation in Macedonia, where m^i = 0% (0,00), m^d= 10% (0,10) and t = 10% (0,10), the combined tax liability would be 0,2345 or 23,34% and with real interest rate of 10% (0,10) would yield an efective tax rate on investment of 0,0234 or 2,34%. If we assume that an interest income tax of 5% has been intoduced lately m^i = 5% (0,05), than the combined tax liability would be 0,1728 or 17,28%, producing an efective tax rate on investment of 0,0172 or 1,72%. On the other hand, if the corporate and the divident tax are increased on 20% $t = m^d$= 20% (0,20) and m^i = 0% (0,00), it is obvious that the investment tax wedge will additionally increase even on 0,0562 or 5,62%. In the following table some possible combinations of the relevant tax rates and the possible outcomes are presented and iterpreted in terms of the investment tax wedge coefficient.

Table 1 Illustration of the possible combinations of tax rates and their effects on investment under the CCIT system

Possible combination of tax rates	Example	Investment tax wedge $(p^{\sim} - r)$	Effects on equity – financed investment	Effects on normal return and economic rent	Effects on corporate finance	Effects on efficiency (allocation criteria)
$t = m^d = m^i$	10%, 10%, 10%	1,11%	limiting	normal return and rent taxed	favors debt	distortive
$t > m^d = m^i$	20%, 10%, 10%	2,50%	limiting	normal return and rent taxed	favors debt	distortive
$t > m^d > m^i$	30%, 20%, 10%	6,07%	limiting	normal return and rent taxed	favors debt	distortive
$t > m^d < m^i$	20%, 10%, 28%	0,00%	indifferent	rent taxed only	indifferent	neutral
$t > m^d < m^i$	10%, 5%, 30%	-1,81%	stimulating	subsidized	favors equity	distortive
$t = m^d > m^i$	20%, 20%, 10%	4,06%	limiting	normal return and rent taxed	favors debt	distortive
$t = m^d < m^i$	10%, 10%, 19%	0,00%	indifferent	rent taxed only	indifferent	neutral
$t = m^d < m^i$	10%, 10%, 30%	-1,36%	stimulating	subsidized	favors equity	distortive
$t = m^d = 0, m^i$	0%, 0%, 10%	-1,00%	stimulating	subsidized	favors equity	distortive
$t = m^d, m^i = 0$	10%, 10%, 0%	2,34%	limiting	normal return and rent taxed	favors debt	distortive
$t = m^i, m^d = 0$	10%, 10%, 0%	0,00%	indifferent	rent taxed only	indifferent	neutral
$t = 0, m^i = m^d$	0%, 10%, 10%	0,00%	indifferent	rent taxed only	indifferent	neutral
$t = m^d = m^i = 0$	0%, 0%, 0%	0,00%	indifferent	rent taxed only	indifferent	neutral

Source: Author's calculations and interpretations

Of course, the Classical System of Corporation Tax could produce in theory some favourable outcomes, despite its infamous reputation. As we can see from Table 1, an *incease in corporate and divident tax* will generally *increase liabilities and the burden on investment*, while an *increase in interest income tax* will *decrease tax obligations* and *vise versa*. If the combined liability of the corporate and the dividend tax from the denominator is higher than the interest tax liability from the nominator, the investment tax wedge will be positive, with limiting, distortive effects on the equiy-financed investment. If this combined liability is equal to the interest tax

liability, regardless the level of tax rates, the system will be neutral and indifferent concerning the investment decision.[1] And in the third option, every time when the combined liability is less than the nominator, with no respect to the level of tax rates, the system will create favourable conditions, stimulating the equity-financed investments trough subsidization of the normal rate of the return. Usually, the authorities avoid the last condition in order to escape any additonal refunds, and the second one is unlikely to be found also. The circumstance that sustains a positive tax burden, actually represents a reflection of what is known as a true CCT system. So, the Classical Corporation Tax assumes a positive (non-zero) tax rates with a corporate income and a divident income tax equal or higher than the interest income tax and a right to the company to deduct the interest payments from the corporate income tax base.
We may conclude that the CCT as we know it, produces in total, the highest amount of taxes paid on a single unit of corporate profit, entails double taxation, and possess a large distortive potential on corporate finance, but as mentioned, only if the interest payments are being continuousely deductible from the tax base and the tax rates met with the apropriate specifications. Under the conditions of Classical System, the normal return and the extra profit at its source and its destination are effectivelly streamed by the means of taxing regime. But if we put aside these limitations, certain advantages open some new frontiers and possibilities for the CCT. For instance, the incorporated principle of CCT for separate and independent taxation of company's income enables the corporate tax from the first stage to act as a withholding barrier for the personal taxes imposed in the second stage. Another positive atribution is the simple tax structure. The CCT's in-build simplicity without any complex rules for exempting flow-troughs of capital income raised the idea for the Classical Corporation Tax as a global mean of tax harmonization in an international contex. These present only a handfull of the positive features of CCT acknowledged from the literature (for more see Kari and Yla-Liedenpohja, 2002).

4. The Comprehensive Business Income Tax System (CBIT)

The Comprehensive Business Income Tax System is the first analyzed model of taxation, fundamentally different from the classical approach. Originally proposed and promoted by the U.S. Treasury Department's [8], the CBIT implements neutrality in the debt-equity choice in an antagonistic way. The concept of the CBIT is based on the idea to avoid the need for integration of corporate and shareholder level taxes by taxing the return to capital of corporations only once. Essentially, under the CBIT tax authorities allow no deduction of either interest payments or the return on equity from taxable corporate earnings. Moreover, as notified by Brys and Heady [9], "Except for the CBIT rate, no additional withholding taxes would be imposed on distributions to equity holders or on payments of interest", thus implying the condition of (t, $m^i = 0$, $m^d = 0$). As a result [10], „The corporation is therefore indifferent between debt, newly issued equity and retained earnings as source of finance of its investment under the CBIT".

4.1 CBIT in Debt Financing Alterantives

First, we'll resume the impact of eliminated deduction of interest payments from the corporate income tax base. The initial effect is loss of tax induced benefit of interest payments, and an increased cost of debt from r(1 – t) on only r. If we modify expression [7] according to this:

$$[13] \qquad F^{DE} = \frac{\gamma[\rho - r(1-t)]}{(1+\rho)} = \frac{\gamma(\rho - r)}{(1+\rho)}$$

And integrate it in [4], the cost of capital will change in:

[1] A positive burden can occur even when the relevant tax rates are identical ($t = m^d = m^i$), a situation which is else known as „Flat Tax Rate system" (see Raw 2 from Table 1).

$$[14] \qquad \tilde{p} = \frac{\rho}{(1-t)} - \frac{\frac{\gamma(\rho-r)}{(1+\rho)}(1+\rho)}{\gamma(1+t)} = \frac{\rho}{(1-t)} - \frac{(\rho-r)}{(1-t)} = \frac{\rho-\rho+r}{(1-t)} = \frac{r}{(1-t)}$$

The investment tax wedge will be:

$$[15] \qquad \tilde{p} - r = \frac{r}{(1-t)} - r = r\left[\frac{1}{(1-t)} - 1\right]$$

Or more preciselly, if we calculate furtherlly:

$$[16] \qquad \tilde{p} - r = r\left[\frac{1}{(1-t)} - 1\right] = r\left[\frac{1}{(1-t)} - \frac{(1-t)}{(1-t)}\right] = \frac{r-r+rt}{(1-t)} = \frac{rt}{(1-t)}$$

As it can be seen from expression [16] the tax wedge is not zero as usual, but is identical with the wedge from the case of only corporate taxation of equity financed investment. Actually, with the imposed restriction on the interest payments deductability, the CBIT removes the induced advantage of debt, and creates equal prefference with equity. Equation [16] ilustrates the apsence of the personal tax rates whitin the process of taxation, which means that the profit is only taxed once at corporate level under the corporate tax rate *t*. The last is considered as a certain advatnage of CBIT, as the single time taxation of the whole profit at corporate level (which means at the source of profit), actually eliminates the need for the withholding function of the personal taxes.
In our example, if the interest rate was estimated 10%, as we know, the usual treatment of debt investment would generate a zero tax burden. But under the CBIT, the same interest rate and a corporate tax rate of 10% would create tax liability of 0,1111 (11,11%) and a positive burden on investment of 0,0111 (1,11%).

4.2 CBIT in Equity Finance Alterantives - With no Tax Credit Available, (t, m^i = 0, m^d = 0, c = 0)

Next, we illustrate the alternative of equity finance investment, without an available tax credit on divident distributions. As we said, after the initial taxation of the profit at corporate level, the CBIT does not impose any additional withholding taxes at personal level. The apsence of personal taxes imply value of unity for the tax discrimination variable (γ = 1), equalization of the shareholder's discount rate with the real interest rate *(ρ = r)* and accordingly new equation for the cost of capital:

$$[17] \qquad \tilde{p} = \frac{\rho}{(1-t)\gamma} = \frac{r}{(1-t)}$$

This will implicate the investment tax wedge as well:

$$[18] \qquad \tilde{p} - r = \frac{r}{(1-t)} - r = r\left[\frac{1}{(1-t)} - 1\right] = \frac{rt}{(1-t)}$$

It is obvious from expression [26] that the „double taxation" effect is neutralized with the implementation of this system and the need for integration is effectivelly avoided.

4.3 CBIT in Equity Finance Alterantives - With no Tax Credit Available,

Version (t, $m^i = m^d \neq 0$, c = 0)

Similar effect could be provided if the personal tax rates are equal and at the same time different from zero:

[19] $$\gamma = \frac{(1-m^d)}{(1-z)(1-c)} = \frac{(1-m^d)}{(1-z)} \quad \text{and} \quad \rho = \left(\frac{1-m^i}{1-z}\right) r = \left(\frac{1-m^d}{1-z}\right) r$$

[20] $$\widetilde{p} = \frac{\rho}{(1-t)\gamma} = \frac{\frac{(1-m^d)r}{(1-z)}}{(1-t)\frac{(1-m^d)}{(1-z)}} = \frac{r}{(1-t)}$$

[21] $$\widetilde{p} - r = \frac{r}{(1-t)} - r = r\left[\frac{1}{(1-t)} - 1\right] = \frac{rt}{(1-t)}$$

From the last we can conclude that the implememtation of CBIT not necesserally requires the conditionality of zero personal income tax rates, but rather the conditionality of equal (proportional) personal tax rates. Yet, this rare theoretical form is not popular, since it‘s not compatable with the principals of the CBIT system.

4.4 CBIT in Equity Finance Alterantives – With a Tax Credit Available, (t, $m^i = 0$, $m^d = 0$, c = t)

Although the purpose of CBIT is to distribute the burden evenly among the different sources of finance, the concept of „non-deductibility“ could create a certain preferences to equity only in the presence of a tax credit. Regardless that this combination, represents once again, only a theoretical possibility because of its contradictory nature, hypotetchically the effect is present and could be captured with a slight methodological modification. Therefore, if we incorporate plus the condition of *c = t,* than:

[22] $$\gamma = \frac{1}{(1-t)}$$

[23] $$\widetilde{p} = \frac{\rho}{(1-t)\gamma} = \frac{r}{(1-t)\frac{1}{(1-t)}} = r$$

[24] $$\widetilde{p} - r = r - r = 0$$

From here we can see that in this scenario the burden is zero, which is less than the positive burden of the investment covered with debt.

Indeed, the method of taxation of interest payments really provides neutrality between the sources of finance, but also initiate some serious consquences majorly, for the „big lenders“ in capital market. As described by Brys and Heady [11], „A large part of total interest income is effectively not taxed in most countries – for instance because tax exempt institutional investors invest a large part of their portfolio in debt. The introduction of a corporate income tax on interest payments might then strongly increase the cost of debt finance for corporations. This not only will reduce the amount of investment projects that will be undertaken, but it might force

corporations into bankruptcy. The CBIT might therefore require a rather low corporate income tax rate". Accordingly, higher cost of debt is the leading limitation of this source-based form of tax. The taxation of interest income at the source will negatively impact investors which in compensation will require a higher before-tax rate of return such that, after imposing the CBIT, they'll earn an after-tax return at least equal to the real interest rate. To relieve the situation, except the requirements for lower corporation tax rates, the officials might want to introduce the concept of CBIT gradually, phasing the implementation over a longer period of time. Another problematic issue is the inability of CBIT to secure equality among wage earners, which usually fall under the progressive tax rate schedule, and the self-employed, mostly treated under the CBIT's proportional rate. To do so, the income of self-employed need to be separated into a capital income component and a labor income component, which is the procedure otherwise known as "income splitting". However, [12], "The choice between capital income and labor income would therefore continue to be distorted under a CBIT system", since they are independently treated under the two different taxing regimes. Additional critics are placed on the imposed level of burden and the way how CBIT taxes the profit rate as a whole. Namely, the level of tax burden is higher than the alternative systems with a gross return on debt and equity-financed investment fully taxed at the corporate tax rate. The last means that the economic rent including the normal rate of return are being effectively charged by the CBIT regime. In order to bring in some alleviation, at least for the normal return, the CBIT might be accompanied with a kind of relieving or incentive measure, for example, such as the immediate expensing of investment [13].
The summarizing Table 2 is a reminder of the possible efects from the CBIT system on investment.

Table 2 Illustration of the possible effects of CBIT on investment

CBIT Variants	Example	Invest-ment tax wedge $(\bar{p} - r)$	Effects on equity – financed invest-ment	Effects on normal return and economic rent	Effects on cor-porate finance	Effects on efficiency (allocation criteria)
t, m^i = 0, m^d = 0, c = 0	10%, 0%, 0%	1,11%	limiting	normal return and rent taxed	indifferent	neutral
t, $m^i = m^d \neq 0$, c = 0	10%, 20%, 20%	1,11%	limiting	normal return and rent taxed	indifferent	neutral
t, m^i = 0, m^d = 0, c = t	10%, 0%, 0%	0,00%	indifferent	rent taxed only	favors equity	distortive

Source Author's calculations and interpretations

At the finishing point, the effects from taxation on investment performance are summarized in Table 3, and the qualitative attributions of the analyzed basic model tax systems are given in Table 4.

Table 3 The effects from taxation on investment performance

Classical Corporation Income Tax System (CCT)	
Debt	0
New equity issues	$r\left[\frac{(1-m^i)}{(1-t)(1-m^d)}-1\right]$
Coprehensive Business Income Tax System (CBIT)	
Debt	$r\left[\frac{1}{(1-t)}-1\right]$ *or* $\frac{rt}{(1-t)}$

New equity issues: Basic model of CBIT without a tax credit ***(t, m^i = 0, m^d = 0, c = 0)***	$r\left[\frac{1}{(1-t)}-1\right]$ *or* $\frac{rt}{(1-t)}$
New equity issues:Model of non-zero rate CBIT without a tax credit ***(t, m^i = m^d≠ 0, c = 0)***	$r\left[\frac{1}{(1-t)}-1\right]$ *or* $\frac{rt}{(1-t)}$
New equity issues: Basic model of CBIT with a tax credit ***(t, m^i = 0, m^d = 0, c = t)***	0

Source Summary and review of author's calculations

Table 4 Summary of qualitative attributions of basic model tax systems

Model of tax system	Effects on debt finance	Effects on new equity finance	Effects on econo-mic rent	Effects on normal return	Withhold-ing function criteria	Location specific criteria	Overal alocation criteria
(CCT)	favors	discriminates	taxed	taxed	withholds rents and normal return	source & resi-dence-based	distortive
(CBIT)	neutral (indifferent)	neutral (indifferent)	taxed	taxed	no withholding function at all	source-based	neutral

Source Author's interpretations

5. Conclusion

In this article, we explored the properties of the Comprehensive Business Income Tax system, a proposal of the US Treasury Department for neutral corporate tax, accepted and promoted by the OECD. Under the classical corporation tax regime, after the initial taxation at corporate level, corporate profits are distributed to the shareholders in a form of dividends, capital gains or interest payments, and are subject to additional taxation at personal level. At the same time interest payments are deductible from the corporate income tax base. The consequence is imposition of "extra" burden on total corporate profit from its source to its destination. Since this is considered unfair and could distort the economic activity, the officials of the OECD proposed more appropriate "neutral" tax systems with abilities to sustain lower tax burden such as the CBIT system. Indeed, the performed examination of the properties of Comprehensive Business Income Tax System, through the applied methodology of EMTR, revealed satisfactory results in the terms of neutrality in contrast to the traditional Classical Corporation Tax, opening the possibilities for its alternative utilization.

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